

Heat Up to Some Cool Reactions, Page 1 of 2

Every chemical reaction is accompanied by a change in temperature. Sometimes the change is barely noticeable and other times it's extreme. Sometimes the temperature goes up and other times it goes down. Try the two chemical reactions described in this activity to experience two different kinds of temperature changes

PART A

Materials:

3% hydrogen peroxide (do not use a higher percentage)

Measuring spoons

Yeast, (grains)

Cup (paper or plastic)

Thermometer (use thermometers with red liquid only)

Watch (with a second hand)

Three people (at least)

Procedures:

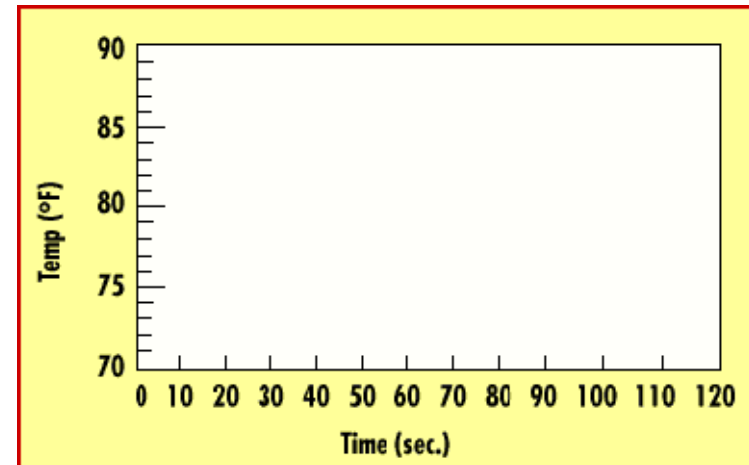
1. Make a chart like the one below.

[illegible]

Place the thermometer into the cup. Hold the thermometer and cup so they do not fall over. Read the temperature and record it in the chart under "Time 0".

3. Measure 1 teaspoon of yeast. Have one partner watch the thermometer and another look at the second hand on a watch.
4. Dump all the yeast into the cup. Gently swirl the cup while one partner calls out the time every 10 seconds. When each 10 seconds is called, another partner should call out the temperature. The third partner should record the temperature in the chart. What did you observe?

5. Make a graph like the one here. Use the information in your chart to graph your results. During what period of time did the temperature change the most? How about the least?



PART B

Materials:

3% hydrogen peroxide (do not use a higher percentage)

Measuring spoons

Yeast (fresh)

Watch (if using analog, make sure it has a second hand),

Cup (paper or plastic)

Thermometer (use thermometers with red liquid only)

Procedures:

1. Repeat all the steps, but this time you will use yeast in bars (2 sq cm)
2. Complete the chart and the graph

[illegible]

Lab Report Evaluation Form

A completed Lab Report should include the following sections:

Objectives, Title, Problem, Hypothesis, Materials, Procedures, Data, Conclusion, and Conclusion Questions.



**This Lab Report Is Completed
The Best Of My Ability.**

X_____

(Student Signature)

Name: _____

Teacher: Ms. Selby

Title of Experiment: _____

Date Submitted: _____

Lab Partner(s): _____, _____

<u>Teacher</u>	<u>Criteria</u>	<u>Student</u>
0,25,50, 75, 100	Clear and Appropriate HEADING, TITLE, PROBLEM, and HYPOTHESIS.	0,25,50, 75, 100
0,25,50, 75, 100	All MATERIALS listed and a summary of PROCEDURE.	0,25,50, 75, 100
0,25,50, 75, 100	Appropriate presentation of DATA and observations including graph(s), chart(s), drawing(s), etc. Accuracy of data.	0,25,50, 75, 100
0,25,50, 75, 100	Clear and concise CONCLUSIONS. Conclusion addresses problem and states knowledge gained. Answers to all QUESTIONS.	0,25,50, 75, 100
0,25,50, 75, 100	Overall- NEATNESS, GRAMMAR, adheres to FORMAT, etc.	0,25,50, 75, 100
_____	<-----Percent Average = Lab grade----->	_____

Teacher Comments: